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MEDICAL AND DEMOGRAPHIC SITUATION IN THE CENTRAL ECONOMIC ZONE OF THE SAKHA REPUBLIC (YAKUTIA)

ABSTRACT

The analysis of the medical and demographic situation has been conducted in the Central Economic Zone (CEZ) of the Sakha Republic (Yakutia). CEZ includes such districts, as Amginsky, Gorny, Kobyaysky, Megino-Kangalassky, Namsky, Tattinsky, Ust-Aldan, Khangalassky, Churapchinsky and Yakutsk - the capital of the republic. According to medical and geographical zoning, these municipalities are part of a group of central and beyond the Lena River districts. The following medical and demographic indicators: fertility, mortality, natural increase, infant mortality, nuptiality and divorce rate were analyzed. At the same time, the indicators of the natural movement of the population were considered depending on the attribution to the urban or rural population. The medical and demographic situation in the CEZ was revealed as generally favorable. Yakutsk and most of the districts are characterized by a relatively high fertility and low mortality, which offers a positive picture of natural increase. Infant mortality does not raise any particular concern. There are negative indicators of nuptiality in a number of districts.

Keywords: medical and demographic situation, fertility, mortality, causes of death, natural increase, natural movement of the population, infant mortality, nuptiality, divorce rate.

INTRODUCTION

Issues of public health and health development have always been among the priorities in the activities of state bodies of Yakutia. For example, in the social and development Strategy of the Sakha Republic until 2030, with defined main directions until 2050 there are sections directly or indirectly affecting the health care: demographic and family policy, innovative healthcare, physical education and sport, social protection of the population. The entire territory of the republic according to the section “Development of territorial planning” is divided into five economic zones: Arctic, Western, Central, Eastern and Southern.

There is a need to assess certain characteristics of public health of the population at this stage, including medical and demographic indicators, since indicator values of expected results are planned by 2030. In this article an analysis of the medical and demographic situation in the Central Economic Zone will be made.

Materials and methods of research. The medical and demographic situation in the Central Economic Zone (CEZ) of the Sakha Republic (Yakutia) for 2000-2016 was examined according to the official statistics of the Federal State Statistics Service (FSSS or Rosstat) and the Yakut territorial department of the FSSS [1, 2].

For the analysis of the medical and demographic indicators, we used the percentile (centile) method, according to this method, the districts with indicators up to the 10th percentile belonged to the territories with a low level of one or other indicator, from 10 to 25th percentile - with a level below average, from 75 to 90 - above average and over the 90th percentile - with a high level. Obviously,

Table 1

Total fertility rate

	Number of births per 1000 population											
	2000	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total population												
Sakha Republic	13,7	14,2	15,9	16,0	16,7	16,8	17,1	17,8	17,5	17,8	17,1	16,0
Amginsky	17,1	15,5	19,9	20,6	19,2	20,4	20,7	20,2	21,9	22,4	23,0	19,6
Gorny	12,7	19,0	21,4	19,0	18,9	19,5	24,8	22,8	26,1	26,7	24,4	19,6
Kobyaysky	17,1	13,8	15,0	15,8	17,8	15,5	19,4	18,1	20,4	19,9	20,6	15,5
M-Kangalassky	17,6	16,0	19,7	18,6	18,8	17,1	20,5	20,5	24,2	25,4	21,4	21,5
Namsky	17,1	15,5	20,0	19,6	19,7	19,2	19,0	22,9	22,9	23,8	19,3	17,3
Tattinsky	17,4	16,0	16,7	16,7	18,4	21,8	19,8	22,3	22,9	23,6	21,6	18,7
Ust-Aldansky	18,5	16,2	20,2	17,5	16,7	17,8	20,6	19,8	22,6	22,4	20,5	17,0
Khangalassky	12,7	13,3	15,5	16,6	15,6	16,7	16,9	17,0	18,9	19,9	17,5	15,2
Churpachinsky	20,3	16,7	20,4	17,7	20,4	20,6	22,6	23,1	24,0	22,7	21,0	17,7
Yakutsk	13,2	16,0	16,8	17,9	18,8	18,8	16,7	18,2	16,7	16,1	17,0	17,0
Urban population												
Sakha Republic	12,3	13,8	15,1	16,0	16,7	16,5	15,6	16,6	15,5	15,3	15,8	15,3
Kobyaysky	15,0	16,0	19,6	22,6	26,6	24,0	18,9	15,6	18,7	15,3	16,7	12,3
M-Kangalassky	11,0	13,6	13,1	13,1	17,2	12,3	20,5	27,5	28,6	30,4	17,3	22,2
Khangalassky	10,6	13,4	15,5	18,0	17,9	20,9	14,7	16,2	15,9	17,8	16,7	15,1
Yakutsk	13,5	16,3	17,2	19,0	19,6	19,1	16,8	18,7	16,8	16,1	17,2	17,2
Rural population												
Sakha Republic	16,1	15,0	17,5	16,0	16,7	17,4	19,9	19,9	21,1	22,4	19,4	17,3
Amginsky	17,1	15,5	19,9	20,6	19,2	20,4	20,7	20,2	21,9	22,4	23,0	19,6
Gorny	12,7	19,0	21,4	19,0	18,9	19,5	24,8	22,8	26,1	26,7	24,4	19,6
Kobyaysky	18,3	12,8	12,8	12,6	13,6	11,5	19,7	19,3	21,1	22,0	22,4	16,9
M-Kangalassky	18,3	16,3	20,5	19,3	19,0	17,7	27,8	19,6	23,7	24,7	21,9	21,4
Namsky	17,1	15,5	20,0	19,6	19,7	19,2	19,0	22,9	22,9	23,8	19,3	17,3
Tattinsky	17,4	16,0	16,7	16,7	18,4	21,8	19,8	22,3	22,9	23,6	21,6	18,7
Ust-Aldansky	18,5	16,2	20,2	17,5	16,7	17,8	20,6	19,8	22,6	22,4	20,5	17,0
Khangalassky	14,7	13,2	15,5	15,2	13,6	12,9	18,8	17,8	21,6	21,8	18,2	15,3
Churpachinsky	20,3	16,7	20,4	17,7	20,4	20,6	22,6	23,1	24,0	22,7	21,0	17,7
Yakutsk	5,2	10,6	10,7	0,6	5,2	13,7	16,6	9,2	15,6	17,5	12,8	13,0

Notes to the tables 1-7:

	low level for fertility, NI, nuptiality and high for mortality, IM, divorce rate
	level below average for fertility, NI, nuptiality and above average for mortality, IM, divorce rate
	level above average for fertility, NI, nuptiality and below average for mortality, IM, divorce rate
	high level for fertility, NI, nuptiality and low for mortality, IM, divorce rate

Table 2

Total mortality rate

	Number of deaths per 1000 population											
	2000	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total population												
Sakha Republic	9,7	10,2	9,6	10,0	9,8	9,8	9,4	9,3	8,7	8,6	8,5	8,4
Amginsky	7,7	9,9	10,1	8,5	11,0	9,3	8,1	9,2	8,2	9,1	8,3	7,8
Gorny	9,5	8,7	7,3	7,8	7,5	6,5	7,7	8,0	7,4	8,0	8,0	7,3
Kobyaysky	11,8	10,3	10,8	11,5	10,4	10,8	11,2	11,1	9,4	9,9	9,1	10,4
M-Kangalassky	9,1	9,3	10,5	10,5	9,2	9,5	9,1	10,0	9,4	9,4	9,1	9,0
Namsky	9,3	10,0	8,4	8,8	8,5	7,2	8,3	6,8	7,0	7,8	6,1	7,3
Tattinsky	9,5	9,1	10,1	9,6	9,8	8,4	9,7	10,0	8,6	7,8	8,7	7,8
Ust-Aldansky	9,0	9,0	9,9	9,5	8,1	8,9	7,7	9,7	9,4	8,4	8,0	9,4
Khangalassky	10,6	10,4	9,7	10,1	10,2	10,2	9,7	9,0	10,1	9,0	10,9	9,6
Churpachinsky	9,1	10,5	9,7	8,9	8,7	10,4	9,9	8,2	7,8	7,4	8,3	6,4
Yakutsk	9,9	9,5	8,1	8,4	8,1	8,4	7,3	7,4	7,1	7,0	7,0	6,7
Urban population												
Sakha Republic	9,8	10,1	9,4	10,0	9,9	9,9	9,2	9,2	8,4	8,1	8,3	8,1
Kobyaysky	18,1	15,3	14,9	16,7	16,6	17,6	22,2	15,1	14,0	13,6	10,0	9,7
M-Kangalassky	11,3	10,6	12,8	6,7	7,8	8,6	10,0	9,5	9,4	7,5	8,9	8,1
Khangalassky	10,9	11,5	10,1	10,3	11,9	12,1	11,3	9,2	10,0	8,7	10,1	11,1
Yakutsk	9,9	9,5	8,2	8,8	8,3	8,4	7,2	7,7	7,0	6,9	6,8	6,6
Rural population												
Sakha Republic	9,5	10,2	9,9	9,9	9,5	9,7	9,8	9,7	9,3	9,4	9,0	8,9
Amginsky	7,7	9,9	10,1	8,5	11,0	9,3	8,1	9,2	8,2	9,1	8,3	7,8
Gorny	9,5	8,7	7,3	7,8	7,5	6,5	7,7	8,0	7,4	8,0	8,0	7,3
Kobyaysky	8,4	7,8	8,9	8,9	7,4	7,7	6,1	9,3	7,3	8,3	8,6	10,6
M-Kangalassky	8,8	9,1	10,3	11,0	9,4	9,7	12,2	10,0	9,3	9,7	9,1	9,1
Namsky	9,3	10,0	8,4	8,8	8,5	7,2	8,3	6,8	7,0	7,8	6,1	7,3
Tattinsky	9,5	9,1	10,1	9,6	9,8	8,4	9,7	10,0	8,6	7,8	8,7	7,8
Ust-Aldansky	9,0	9,0	9,9	9,5	8,1	8,9	7,7	9,7	9,4	8,4	8,0	9,4
Khangalassky	10,3	9,3	9,4	9,9	8,7	8,4	8,3	8,8	10,1	9,3	11,7	8,3
Churpachinsky	9,1	10,5	9,7	8,9	8,7	10,4	9,9	8,2	7,8	7,4	8,3	6,4
Yakutsk	11,0	10,1	6,2	1,4	3,4	8,0	9,8	3,7	8,9	9,0	10,2	9,2

Table 3

Deaths by main classes of causes of death in 2016 (per 100 000 population)

	All causes	Class I (infectious disease)	Class II (neoplasms)	Class IX (CSD)	Class X (DRS)	Class XI (DDS)	Class XX (external causes)
Sakha Republic	837,8	15,0	134,6	368,7	26,8	38,1	135,4
Amginsky	784,6	18,0	89,8	293,5	12,0	41,9	203,6
Gorny	730,0	8,4	142,6	402,8	8,4	25,2	117,5
Kobyaysky	1035,2	0,0	118,5	450,4	15,8	23,7	237,1
M-Kangalassky	900,7	16,3	162,6	357,7	32,5	13,0	185,3
Namsky	732,0	16,4	78,1	263,2	32,9	12,3	156,3
Tattinsky	776,9	6,1	165,2	354,8	30,6	30,6	146,8
Ust-Aldansky	936,2	23,9	138,5	339,1	38,2	23,9	210,2
Khangalassky	961,1	21,6	213,2	333,8	46,4	27,8	148,3
Churpachinsky	635,2	9,6	76,4	296,1	14,3	28,7	157,6
Yakutsk	669,8	16,9	127,5	294,8	25,6	21,1	102,5

with the indicators being within the limits of the 25th to the 75th percentile, the districts belonged to a group with average values. After that, nine districts and Yakutsk were grouped for further analysis already within the Central Economic Zone.

Results and discussion.

Fertility. The total fertility rate in nine districts and Yakutsk in the CEZ is presented in Table 1. The situation on the fertility in this economic zone can generally be assessed as favorable, especially in the Amginsky, Gorny, Megino-Kangalassky, Namsky and Churapchinsky districts. Kobyaysky, Khangalassky districts and Yakutsk are apart, but mostly with the average values of this indicator.

The picture is also favorable for the urban population in the three districts and Yakutsk: a high fertility rate for a number of years is common for the Kobyaysky and Megino-Kangalassky districts, for Yakutsk - above average, for Khangalassky district - basically average values. All rural districts are included in the number of territories with high and above average fertility levels. The situation with the fertility of the rural population in Kobyaysky district and Yakutsk, especially in rural settlements of the capital of the republic, is unfavorable.

Mortality. The overall mortality rates of these territories are also characterized positively (Table 2). Only in the Kobyaysky district there are no low and below average mortality rates of all and urban population.

The picture for the rural population of these areas is more encouraging: mortality rates are more frequently low and lower than average mortality rates. The level above average was only once in the Khangalassky district (2015).

Data on the deceased by the main classes of causes of death in 2016 are presented in Table 3. For example, from infectious diseases most people die in the Ust-Aldansky and Khangalassky districts. No mortality from infectious diseases recorded in the Kobyaysky district. High mortality from neoplasms is observed in the Khangalassky district, low - in the Churapchinsky district, below average - in the Amginsky and Namsky districts. Low mortality from circulatory system diseases (CSD) is also common for the Amginsky and Namsky districts, below average for the Churapchinsky district and Yakutsk. Mortality from the diseases of the respiratory system (DRS) is relatively high in the Khangalssky and Ust-Aldansky districts, low - in the Gorny

Table 4

Total rate of natural increase (per 1000 population)

	2000	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	Total population											
Sakha Republic	4,0	4,0	6,3	6,0	6,9	7,0	7,7	8,5	8,8	9,2	8,6	7,6
Amginsky	9,4	5,6	9,9	12,0	8,3	11,1	12,6	11,0	13,7	13,3	14,7	11,8
Gorny	3,2	10,3	14,1	11,3	11,4	12,9	17,1	14,8	18,7	18,7	16,4	12,3
Kobyaysky	5,3	3,6	4,2	4,4	7,4	4,7	8,2	7,0	11,0	10,0	11,5	5,1
M-Kangalassky	8,5	6,7	9,1	8,0	9,5	7,6	11,4	10,5	14,8	16,0	12,3	12,5
Namsky	7,8	5,4	11,6	10,8	11,2	12,0	10,7	16,1	15,9	16,0	13,2	10,0
Tattinsky	7,9	6,9	6,6	7,1	8,6	13,4	10,1	12,3	14,3	15,8	12,9	10,9
Ust-Aldansky	9,5	7,2	10,4	8,0	8,6	8,9	12,9	10,1	13,2	14,0	12,5	7,6
Khangalassky	2,1	2,9	5,8	6,5	5,4	6,5	7,2	8,0	8,8	10,9	6,6	5,6
Churpachinsky	11,2	6,2	10,7	8,8	11,7	10,2	12,7	14,9	16,2	15,3	12,7	11,3
Yakutsk	3,3	6,5	8,7	9,6	10,8	10,4	9,4	10,8	9,6	9,1	10,0	10,3
	Urban population											
Sakha Republic	2,5	3,7	5,7	6,0	6,8	6,6	6,4	7,4	7,1	7,2	7,5	7,2
Kobyaysky	-3,1	0,7	4,7	5,9	10,0	6,4	-3,3	0,5	4,7	1,7	6,7	2,6
M-Kangalassky	-0,3	2,9	0,3	6,4	9,5	3,7	10,5	18,0	19,2	22,9	8,4	14,1
Khangalassky	-0,4	1,9	5,5	7,7	6,0	8,8	3,4	7,0	5,9	9,1	6,6	4,0
Yakutsk	3,6	6,9	9,0	10,2	11,3	10,7	9,6	11,0	9,8	9,2	10,4	10,6
	Rural population											
Sakha Republic	6,6	4,8	7,6	6,1	7,2	7,7	10,1	10,2	11,8	13,0	10,4	8,4
Amginsky	9,4	5,6	9,9	12,0	8,3	11,1	12,6	11,0	13,7	13,3	14,7	11,8
Gorny	3,2	10,3	14,1	11,3	11,4	12,9	17,1	14,8	18,7	18,7	16,4	12,3
Kobyaysky	9,9	5,0	4,0	3,7	6,2	3,9	13,6	10,0	13,8	13,7	13,7	6,3
M-Kangalassky	9,5	7,1	10,2	8,3	9,6	8,0	15,6	9,6	14,4	15,0	12,8	12,3
Namsky	7,8	5,4	11,6	10,8	11,2	12,0	10,7	16,1	15,9	16,0	13,2	10,0
Tattinsky	7,9	6,9	6,6	7,1	8,6	13,4	10,1	12,3	14,3	15,8	12,9	10,9
Ust-Aldansky	9,5	7,2	10,4	8,0	8,6	8,9	12,9	10,1	13,2	14,0	12,5	7,6
Khangalassky	4,4	3,8	6,1	5,3	4,9	4,5	10,5	9,0	11,5	12,5	6,5	7,0
Churpachinsky	11,2	6,2	10,7	8,8	11,7	10,2	12,7	14,9	16,2	15,3	12,7	11,3
Yakutsk	-5,8	0,5	4,4	-0,7	1,8	5,7	6,8	5,5	6,7	8,5	2,6	3,8

Table 5

Indicators of an infant mortality
(deaths under the age of 1 year per 1000 live births)

	2000	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Sakha Republic	17,6	10,6	10,4	9,1	8,9	7,2	6,3	9,6	9,6	8,0	7,6	7,2
Amginsky	13,8	7,5	15,1	11,5	15,0	8,6	2,8	14,6	5,4	2,7	10,4	5,7
Gorny	6,8	9,1	4,1	4,1	4,6	9,0	10,3	7,5	6,6	9,8	6,7	0,0
Kobyaysky	8,0	15,3	19,5	0,0	21,1	9,4	11,5	12,6	7,6	7,8	23,0	5,1
M-Kangalassky	17,5	13,3	8,5	6,9	6,8	14,8	8,5	7,9	12,1	6,6	6,1	7,6
Namsky	8,5	8,9	11,8	6,8	6,8	13,6	9,1	7,9	11,2	0,0	4,3	6,9
Tattinsky	20,9	0,0	21,0	3,5	12,8	2,7	0,0	13,5	5,3	10,4	8,5	0,0
Ust-Aldansky	21,7	14,0	16,7	12,6	5,4	12,7	2,2	7,0	12,6	2,1	2,1	7,9
Khangalassky	15,9	8,3	9,3	1,8	7,3	8,8	10,6	8,9	9,7	9,3	11,9	6,1
Churpachinsky	21,3	3,0	5,8	8,1	7,3	9,6	7,0	8,4	2,0	2,1	2,3	2,3
Yakutsk	17,0	9,0	6,9	7,9	5,9	5,1	5,1	8,4	12,0	11,3	6,5	6,6

Table 6

IM rates by the main classes of causes of death in 2016(per 1000 live births)

	All causes	Class I (infectious disease)	Class X (DRS)	Class XVI (perinatal causes)	Class XVII (congenital anomalies)	Class XVIII (inaccurately marked states)	Class XX (external causes)
Sakha Republic	72,3	1,9	7,1	37,4	12,3	3,9	4,5
Amginsky	56,7	-	28,3	28,3	-	-	-
Gorny	0,0	-	-	-	-	-	-
Kobyaysky	51,0	-	-	51,0	-	-	-
M-Kangalassky	76,0	-	-	45,6	15,2	15,2	-
Namsky	69,1	23,0	-	46,1	-	-	-
Tattinsky	0,0	-	-	-	-	-	-
Ust-Aldansky	79,4	-	-	-	52,9	-	26,5
Khangalassky	61,1	-	-	61,1	-	-	-
Churpachinsky	23,0	-	-	23,0		-	-
Yakutsk	65,8	-	10,7	40,9	8,9		1,8

district, as well as in the Amginsky and Churapchinsky districts. On deaths from diseases of the digestive system (DDS) a more or less favorable picture is noted in the Megino-Kangalassky and Namsky districts. Low mortality from external causes is common in Yakutsk and below average in the Gorny district; however, in the Kobyaysky district mortality was above average.

Natural increase. The total rate of natural increase (NI) in the CEZ shows generally good situation for this indicator (Table 4). Only in the Kobyaysky and Khangalassky districts are the average values of the rate and only in the Khangalassky district in 2000, the only time the NI was registered below average.

According to the urban and rural population, the picture by the NI is generally favorable, with the exception of the Kobyaysky district (urban) and Yakutsk (rural). For example, the Kobyaysky district had years of low (2000) and below average NI (2011 and 2014) of urban population, and in Yakutsk - respectively in 2000, 2008, and in rural areas in 2005, 2009, 2012, 2014, 2016.

Infant mortality. For infant mortality (IM) in the CEZ, the verdict is mixed: more or less favorable indicators remain only in the Gorny and Churapchinsky districts, in five municipalities (Amginsky, Megino-Kangalassky, Namsky, Khangalassky districts and Yakutsk) the level of IM at least once exceeded the average level (Table 5, Figures 7 and 8). The average level in the Ust-Aldansky district was twice exceeded, but to be fair, it should be noted that there were years with a lower average level of IM (2009, 2011 and 2015). A high level of IM was once in Kobyaysky (2015) and Tattinsky (2007) districts.

The IM rates by the main classes of causes of death in 2016 indicate either high or medium values, or no mortality due to these reasons (Table 6). For example, in the Gorny and Tattinsky districts in 2016, IM was not registered.

Nuptiality and divorce rate. According to the number of marriages per 1000 population, the leading positions occupied by Yakutsk (high level in 2005-2013), Khangalassky (2011, 2013 and 2014), Megino-Kangalassky (2014) and Churapchinsky (2008) districts (Table 7). For a number of years in these areas, marriage rates were above average. Tattinsky district was noted by the average values of nuptiality during the whole period under review. As for the other districts, there was a low level

Table 7

Total nuptiality and divorce rates

	2000	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Number of marriages per 100 population												
Sakha Republic	6,1	7,4	8,3	7,7	8,4	8,7	9,4	8,2	8,6	8,3	8,0	6,5
Amginsky	4,1	6,0	7,2	7,0	8,0	7,2	7,0	7,5	7,6	7,4	6,9	5,9
Gorny	3,9	6,1	6,9	6,1	5,8	7,7	7,9	5,4	7,3	9,2	9,0	5,3
Kobyaysky	7,1	5,2	5,5	6,6	6,1	6,8	6,6	6,5	5,9	8,1	6,2	5,6
M-Kangalassky	5,4	7,0	8,1	7,8	7,8	7,7	9,1	6,3	7,2	9,7	8,4	6,6
Namsky	4,9	5,1	7,1	6,5	6,3	6,7	7,4	5,8	6,5	6,6	5,8	4,7
Tattinsky	6,2	6,8	7,2	6,3	8,2	7,5	7,8	6,8	7,0	8,0	7,1	6,5
Ust-Aldansky	5,9	5,5	8,0	7,0	5,2	5,2	6,0	5,2	5,9	7,2	6,0	4,7
Khangalassky	5,8	7,2	6,7	6,5	7,1	8,9	9,6	8,5	10,7	10,1	8,2	7,2
Churpachinsky	6,4	7,3	7,9	8,4	8,7	9,0	8,7	7,1	7,1	7,8	7,5	5,9
Yakutsk	6,2	8,5	10,1	9,1	9,7	10,4	11,5	10,0	10,0	8,0	8,7	6,7
Number of divorces per 1000 population												
Sakha Republic	4,2	3,9	4,4	4,7	4,9	4,7	5,0	4,5	4,8	4,7	4,3	4,3
Amginsky	1,3	2,3	2,0	3,3	3,6	3,6	2,9	3,0	2,6	3,2	3,5	2,8
Gorny	1,7	2,1	2,0	3,1	2,2	3,5	3,6	2,7	3,5	3,4	3,4	3,1
Kobyaysky	3,6	2,8	2,2	2,9	2,6	2,6	3,8	3,6	3,2	3,6	2,3	4,0
M-Kangalassky	2,0	2,0	2,4	2,3	3,8	3,3	4,0	3,8	4,2	4,2	3,6	3,5
Namsky	2,2	2,7	2,6	2,9	3,2	2,9	2,8	3,3	3,4	2,7	3,4	3,7
Tattinsky	1,8	1,8	3,2	2,7	3,9	3,2	3,2	2,9	4,2	3,3	3,0	2,9
Ust-Aldansky	2,0	1,8	1,8	3,2	2,5	2,4	2,2	2,7	2,1	2,2	2,4	2,3
Khangalassky	2,2	2,8	2,7	3,4	3,8	3,7	4,7	3,9	4,7	4,2	4,2	4,6
Churpachinsky	2,4	2,5	2,4	3,2	4,3	3,7	3,4	2,8	4,1	3,7	2,9	3,2
Yakutsk	4,5	4,0	4,9	5,2	5,0	4,9	5,6	4,6	5,1	4,8	4,3	4,1

of nuptiality: more than others in Ust-Aldansky (five times), Gorny (three) and Namsky (two) districts.

"Leaders" by high divorce rate are Yakutsk (for seven years the divorce rate was above average) and Khangalassky (two) district. In other areas the picture is favorable, because, at least once, there were years with low or below average levels of divorce rates.

Conclusion. Thus, the medical and demographic situation in the CEZ is generally favorable. Most of the districts and Yakutsk are characterized by a relatively high fertility and low mortality, which leads to a positive picture of natural growth. Infant mortality does not cause much concern. There are negative indicators only by nuptiality in a number of districts.

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PREMATURE MORTALITY OF THE POPULATION OF THE REPUBLIC SAKHA (YAKUTIA) FROM EXTERNAL CAUSES

ABSTRACT

A retrospective analysis of the official statistics for the period 1990-2016 was conducted in order to study the level and structure of mortality in the Sakha Republic (Yakutia), It is established that the medical and demographic situation in the Sakha Republic (Yakutia) over the past 25 years is characterized by the high birth rate and high mortality in the young age groups from preventable causes. The mortality of the population by external causes, with a high degree of preventability, leads the causes of mortality in the age categories of children, adolescents, and working-age people. The children deceased from external causes in the age of 1 to 14 years account for 65% of all deaths in this age group, at the age of 15-17 years - 91%, and of working-age persons - 37%. Considering the structure of external causes of death, one pays attention to the high level of deaths by violence. According to 2016 data, the suicide mortality rate (22.7 per 100,000 population) was 34% higher than the average for Russia (14.9), and the murder rate (15.3 per 100,000 population) more than doubled the average one.

Another concerning problem is the death rate resulting from exposure to low natural temperature (cold trauma), which is hardly accounted for in the official statistics. Annually, cold trauma in Yakutia takes more lives than road traffic accidents. According to the 2015data, the cold trauma death rate was 15.1 per 100,000 population, whereas the death rate from road traffic accident was 7.8 per 100,000 population.

Keywords: premature mortality, external causes, Far North regions.